Regional Airline Association
2025 M Street, NW
Suite 800
Washington, DC 20036-3309

Phone: (202) 367-1252
Fax: (202) 367-2252
Email: david_lotterer@dc.sba.com

June 2, 2003

Docket Management System
U.S. Department of Transportation
Docket number FAA-2002-14002
Room Plaza 401, 400 Seventh Street, SW.
Washington, DC 20590-0001.

SUBJECT: Proposed Rule: Area Navigation (RNAV) and Miscellaneous Amendments

Comments provided as Attachment A were prepared by the Regional Airline Association's (RAA) Flight Technology Committee. Attachment A was presented to the collective RAA membership for their review and concurrence. Attachment A represents the position of the RAA in response to your request for comments for the subject proposed rule.

Your consideration of our response is greatly appreciated.

Sincerely,

David Lotterer
Vice President - Technical Services

Attachment A

RAA Operator Comments on RNAV NPRM

U.S. DOT/FAA - Notice of Proposed Rulemaking
Document Number FAA-2002-14002

The following general subjects are addressed within this document.

- NPRM and the rule-making process
- Terminology/Definitions
- Navigation requirements
- Communication

Rule-making Process

This NPRM does not meet with the intent of established rule-making practices by moving RNAV regulatory guidance through the rule-making process outside of the TAOARC (Terminal Area Operations Aviation Rule-Making Committee).

Regional Airline Association
2025 M Street, NW
Suite 800
Washington, DC 20036-3309

Phone: (202) 367-1252
Fax: (202) 367-2252
Email: david_lotterer@dc.sba.com

From FAA Order 1110.132 (TAOARC Charter):

There is a need to fully utilize the capabilities of modern aircraft, specifically the use of area navigation (including the global positioning system). Evolving technologies and potential equipment upgrades provide increased operational and safety benefits not realized unless a practical means is established to direct and facilitate new criteria and implementation. The international aspects of aviation operations and aircraft production require that terminal area operational procedures and associated equipage be consistent.

This committee provides a forum for the Federal Aviation Administration (FAA), other government entities, and affected members of the aviation community to discuss issues and to develop resolutions and processes to facilitate the evolution of safe and efficient terminal area operations. This committee supports the international harmonization process.

We respectfully request that the issues of this NPRM be sent to the TAOARC for review and discussion as part of the rule-making process. The issues raised within this NPRM merit further discussion and are within the scope of the TAOARC's charter.

In the event that the FAA deems it unnecessary to send this issue through the established RNAV rule-making process, we have submitted our comments below on this NPRM.

TERMINOLOGY/DEFINITIONS

Section II. General Discussion, paragraph II.D.4 Approach and Landing Using Instrument Approach Procedures.

1. General question on approaches and vertical guidance information. There are references to vertical glide path information based upon electronic glideslope and GLS as well as PAR. Additionally, there are proposed changes to approach minimums defined as an MDA, which are applicable to an instrument approach procedure without electronic glideslope. Where does barometric VNAV fit into these definitions? With baro-VNAV, approach minimums defined with a DA in lieu of MDA may be used.

The question is; what determines "glide path"? Does this include all of the following?

1. ILS glideslope
2. Augmented GPS APV
3. Barometric VNAV

If baro-VNAV is intended to be included as a glide path, then 91.129 (e)(2) must be affected.

Regional Airline Association
2025 M Street, NW
Suite 800
Washington, DC 20036-3309

Phone: (202) 367-1252
Fax: (202) 367-2252
Email: david_lotterer@dc.sba.com

Additionally, requirements for recurrent proficiency check include 2 precision approaches, 2 non-precision approaches and if the crew is GPS qualified, a GPS approach may be counted as one of the required non-precision approaches. By including a GPS-based approach with barometric VNAV, is this now a precision approach and must be performed in addition to the other 2 precision approaches? The goal should be to establish within the Practical Test Standard document a priority of what constitutes precision and non-precision approaches along with the number of each procedure to be performed.

Section III, 1.1 General Definitions, Precision approach procedure (PA).
2. The inclusion of VASI, PAPI, etc. is not contained within this discussion. In accordance with existing precision approach systems, including VASI, PAPI, etc, this must be added.

Part 1 – DEFINITIONS AND ABBREVIATIONS, Section 1.1 General Definitions, Category II (CAT II)
3. Comment on Cat II operations and use of decision height (DH) and 1200 RVR. Some airports with irregular terrain, such as Seattle (KSEA) must use a DA rather than DH for minimums. Some exceptions must be made to this definition.
For example, the CAT II minimums in KSEA are defined as "Inner Marker Passage" some operators choose to discontinue the approach if the Baro DA is reached prior to inner marker passage in accordance with AC 120-29A 4.3.8.5

The JAA harmonized OpSpecs define Cat II minimum visibility with suitably equipped runways as 1000 RVR, not 1200 RVR. The 1200 RVR minimum visibility definition needs to be harmonized.

Part 1 – DEFINITIONS AND ABBREVIATIONS, Section 1.1 General Definitions, Decision Height (DH)
4. The changes in definitions and terminology can be expected to have significant impact on training materials, equipment manuals, and even equipment design. For example, the new definition of DH does not include Cat I approaches. However, there are controls and displays in flight decks that use this term. This will cause consistency problems and potentially confusion for the crews.

Part 1 – DEFINITIONS AND ABBREVIATIONS, Section 1.1 General Definitions, Nonprecision approach procedure (NPA)
5. The term NPA would now apply only to a procedure with NO vertical guidance. This is a change from long-standing practice, and also will impact training and other documentation throughout the industry.

Part 1 – DEFINITIONS AND ABBREVIATIONS, Section 1.2 Abbreviations and Symbols
6. Is it FAA's intent that the introduction of terms such as APV, PFAF and ATS will now appear throughout equipment and training materials? Will charts now be revised to use these terms? Will the term PFAF now be required on things like FMS CDUs in order to

Regional Airline Association
2025 M Street, NW
Suite 800
Washington, DC 20036-3309

Phone: (202) 367-1252
Fax: (202) 367-2252
Email: david_lotterer@dc.sba.com

be consistent with charting and training materials? What assurance does industry have that these changes will not be demanded in the future, resulting in significant costs to the industry?

Part 1 – DEFINITIONS AND ABBREVIATIONS, Section 1.2 Abbreviations and Symbols
7. The NPRM does not mention LPV. How will it be used in the context of the redefinition of approaches and terminology?

Part 1 – DEFINITIONS AND ABBREVIATIONS, Section 1.1 General Definitions, Category II (CAT II) through Category IIIc (CAT IIIc)
8. The FAA and JAA had previously harmonized the definitions of Category I, II and III approaches. The CAT II and CAT III definitions presented in the NPRM are not consistent with previous harmonization efforts.

II.D.1, II.D.4, III.1.1
9. Category I is a positive change in that it will include precision RNAV like Alaska is doing in Juneau and opens the door for a precision DH instead of having to use a non-precision MDA.

Part 1 – DEFINITIONS AND ABBREVIATIONS, Section 1.1 General Definitions, Category II (CAT II)
10. Cat II harmonization with JAA. - Category II should be defined as a precision instrument approach and landing with a decision height lower than200 feet (60 meters), but not lower than 100 feet (30 meters) and with a runway visual range of not less than 1,000 feet.

Part 1 – DEFINITIONS AND ABBREVIATIONS, Section 1.1 General Definitions, Category III (CAT III)
11. There are no definitions of CAT IIIa, IIIb, and IIIc required due to international harmonization. - Category III should be defined as a precision instrument approach and landing with a decision height lower than 100 feet (30 meters) or no DH, and with a runway visual range less than 1,000 feet.

Part 1 – DEFINITIONS AND ABBREVIATIONS, Section 1.1 General Definitions, Night
12. Where would local night be published? How does the FAA calculate this? Without a definitive source, a pilot is left wondering when night begins. This concept will be very difficult for pilots to comply with.

NAVIGATION REQUIREMENTS

Section 121.349
1. The NPRM directly addresses GPS vulnerability. The proposal clearly states that two navigation systems that rely solely on GPS are not considered independent. This has

Regional Airline Association
2025 M Street, NW
Suite 800
Washington, DC 20036-3309

Phone: (202) 367-1252
Fax: (202) 367-2252
Email: david_lotterer@dc.sba.com

significant ramifications on equipage, particularly regarding some of the upcoming RNP RNAV equipment configurations. If GPS is a required NAV sensor, does this mean there is no such thing as dual "independent" navigation capability?

121.349 Comm and Nav equipment IFR

2. Comment on adoption of performance versus equipment-based rule for requiring specific systems.

Performance is the way to go. However, just as with required report to ATC when DME fails above FL240 (revised to FL 180), there must be some method to determine resultant navigation performance. For example, an aircraft equipped with dual FMS and RNP 0.1 capable reports while enroute that one FMS has failed. The air carrier's MEL may state that single FMS operations are limited to RNP 0.3. In this case, it is incumbent on the flight crew to report new RNP limits, rather than equipment status.

COMMUNICATIONS

Section 121.99

1. The paragraph below regarding emergency communications is ambiguous. Is the intent that the two types of communication must be capable of being simultaneous?

"In addition, the FAA is proposing to add a requirement for a communication system that would have two-way voice communication capability for use between each airplane and the appropriate dispatch office, and between each airplane and the appropriate ATC unit, for non-normal and emergency conditions. The FAA believes it would be necessary from the pilot workload and flight safety standpoints to retain two-way voice communication capability for non-normal and emergency conditions."

An operational comment: In reality, there is very little useful info that a crew can obtain from dispatch during the tactical phase of a non-normal / emergency occurrence. There is value, once the emergency is under control, to coordinate further action on a strategic basis with dispatch. Thus the requirement to have simultaneous two-way communication between the aircraft and dispatch & the aircraft and ATC is unwarranted and certainly not worth the cost of the added equipment.

Section 121.99

2. The requirement for "rapid communications" needs to be well understood from an operational standpoint. There may be circumstances where this cannot be assured.

Section 121.349

3. Depending on the intent, these proposed requirements might impact architecture or levels of redundancy in radio equipage in the future.